

1. (Currently Amended) A control unit for monitoring conditions at and controlling functions of an appliance in response to a step sequence received from a remote server, comprising:

a microcontroller for managing functions of the control unit;
an input-output (I/O) section coupled to the microcontroller for interfacing voltage levels between elements of the appliance and the microcontroller;
a system memory for storing the step sequence received from the remote server;
a wiring interface for connecting input and output points from the control unit to the system or appliance; and
a wireless communication interface for receiving the step sequence;
characterized in that, with connections made only between the wiring interface and the controlled appliance, the microcontroller generates outputs to operate the appliance according to the stored step sequence received.

2. (Previously Amended) The control unit of claim 1 wherein the microcontroller produces control outputs partly in response to input from sensors on the controlled appliance.

3. (Original) The control unit of claim 2 further comprising additional sensors in the control unit, wherein the microcontroller produces control outputs partly in response to input from the additional sensors.

4. (Previously Amended) The control unit of claim 1 wherein the microcontroller monitors sensors, whether internal or on the controlled system or appliance, and transmits status data via the wireless communication interface.

5. (Currently Amended) A method for controlling an appliance, comprising steps of:

(a) connecting a control unit to elements of the appliance by a wiring interface, the control unit comprising a microcontroller for managing functions of the control unit, an input-output (I/O) section coupled to the microcontroller for interfacing voltage levels between elements of the appliance and the microcontroller, a system memory for storing a step sequence received from a remote server, a wiring interface for connecting the elements of the appliance to the control unit, and a wireless communication interface for receiving the step sequence;

(b) receiving the step sequence via the wireless communication interface;
and

(c) storing the step sequence in the memory in the microcontroller; and

(d) operating the appliance according to the stored step sequence received.

6. (Previously Amended) The method of claim 5 wherein, in step (c) the microcontroller produces control outputs partly in response to input from sensors on the controlled appliance.

7. (Original) The method of claim 6 further comprising additional sensors in the control unit, and wherein, in step (c) the microcontroller produces control outputs partly in response to input from the additional sensors.

8. (Previously Amended) The method of claim 5 further comprising a step (d) for monitoring sensors, whether internal or on the controlled system or appliance, and transmitting status data via the wireless communication interface.

9. (Currently Amended) A base station for managing one or more control units in a home or business control system, the control units connected to individual ones of appliances in the home or business, comprising:

a microcontroller for managing functions of the base station;

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memory coupled to the microcontroller for storing one or more step sequences to be performed by one or more of the control units;

a communication port for communicating with the Internet; and

a wireless communication interface;

characterized in that the base station receives the one or more step sequences via the communication port, and transmits individual ones of the step sequences to appropriate control units via the wireless communication interface

and the control units store the received step sequences in a system memory wherein the control units access the stored step sequence in order to monitor and control operations of the connected appliance.

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10. (Previously Amended) The base station of claim 9 wherein the communication port is one of a standard serial or parallel communication port compatible with a personal computer (PC) and wherein the PC handles communication with the Internet for receiving step sequences, and transfers the step sequences to the base station.

11. (Previously Amended) The base station of claim 9 wherein the base station records and identifies all remote control units within range of its wireless communication interface, and selectively transmits step sequences to the control units via the wireless communication interface, the incoming step sequences being identified for individual ones of the control units.

12. (Original) The base station of claim 9 enabled to identify and communicate with up to 256 control units selectively.

13. (Previously Amended) The base station of claim 9 wherein the base station receives status data via the wireless communication interface from control units, and transmits the status data to the Internet.

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14. (Currently Amended) A method for managing functions for a plurality of appliances in a home or business, the appliances connected to control units having each a wireless communication interface for receiving step sequences and transmitting data, the method comprising steps of:

(a) identifying each control unit uniquely electronically;

(b) providing a single base station in the home or business, the base station having a port for communication with the Internet and a wireless communication interface for communicating with the plurality of control units; and

(c) downloading individual step sequences from an Internet site by the base station, the individual step sequences identified for individual ones of the control units, and transmitting the downloaded step sequences selectively to the individual ones of the control units, wherein the control units store the received step sequences in memory and access the memory to monitor and operate the connected appliances.

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15. (Original) The method of claim 14 wherein, in step (c), the base station also receives status data from the control units identified as to the control unit sending the data, and forwards the status data to the Internet site.

16. (Previously Amended) The method of claim 14 wherein the communication port is one of a standard serial or parallel communication port compatible with a personal computer (PC) and wherein a connected PC handles communication with the Internet for receiving the step sequences, and transfers the step sequences to the base station.

17. (Currently Amended) A control system for appliances in a home or business area, comprising:

a plurality of control units, individual ones of the units wired to sensors and actuators of individual ones of the appliances, the control units having each a microcontroller, a system memory, an I/O section, and a wireless communication interface for external communication;

a base station having a communication port to the Internet and a wireless communications interface for communicating with the plurality of control units; and

an Internet site executing software enabling a subscriber associated with the home or business to interact with the base station;

characterized in that the Internet site software provides an interface for the subscriber to review status of systems and appliances having connected control units in the associated home or business, and to author step sequences addressed for individual ones of the control units in the home or business, wherein the subscriber downloads the authored step sequences to the base station which sends them to the control units which store them in system memory and the control units access the system memory to monitor and operate the connected appliance.

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18. (Original) The control system of claim 17 wherein the base station comprises an Internet browser and an Internet-capable port for Internet access.

19. (Original) The control system of claim 17 wherein the base station has a standard serial or parallel port for connection to a personal computer, and the personal computer accomplishes necessary Internet browsing functions.

20. (Original) The control system of claim 17 wherein each control unit is configured to the base station by a specific address.

21. (Previously Amended) The control system of claim 17 wherein the subscriber has a specific web page on the Internet site, wherein all configured, installed and active control units in the home or business with which the subscriber is associated are indicated.

22. (Previously Amended) The control system of claim 21 wherein the base station, through the respective wireless communication interfaces, configures any new control unit brought into the home or business by adding the control unit to a

list managed by the base station, including assigning the control unit an address, and communicating to the associated web site details regarding the new control unit in a manner that the subscriber may monitor and control the appliance associated with the new control unit through the web site.

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23. (Original) The control system of claim 21 wherein the base station, through compatible magnetic induction equipment installed in both the base station and any new control unit, configures any new control unit brought within a maximum induction range by adding the control unit to a list managed by the base station, including assigning the control unit an address, and communicating to the associated web site details regarding the new control unit in a manner that the subscriber may monitor and control the system or appliance associated with the new control unit through the web site.

24.-25. (Cancelled)